NON-PUBLIC?: N
ACCESSION #: 8801260221

LICENSEE EVENT REPORT (LER)

FACILITY NAME: St. Lucie, Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000335

TITLE: Reactor Trip Due To Reactor Protective System Hi Start-Up Rate B Channel In Trip And The Loss Of 1MD 120V AC Instrument Bus Due To Personnel Error
EVENT DATE: 12/21/87 LER #: 87-017-00 REPORT DATE: 01/20/88

OPERATING MODE: 1 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: W. C. Green, Shift Tech Advisor TELEPHONE #: 305-465-3550

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On December 21, 1987, while operating in Mode 1 at 100 percent power, St. Lucie Unit #1 tripped due to the loss of the 1MD 120 volt AC bus. With the Reactor Protective System (RPS) Hi Start-up Rate B channel Bistable in trip, the RPS logic for HI Start-up Rate was 1 of 3. The loss of the 1D Instrument Inverter caused the subsequent loss of the 1MD 120 volt AC bus, which resulted in the actuation of the deenergize to actuate function of the RPS D channel trip Bistables thus satisfying the RPS trip logic.

The root cause of the event was a cognitive personnel error by a utility non-licensed operator not adequately following a plant approved procedure for operation of the 120 volt Instrument AC Class 1E System.

The non-licensed operator was counseled by his supervisor on the importance of adequately following approved procedures and the need for greater attention to detail while performing critical job responsibilities. A procedure for infrequent operations or manipulations is being drafted. This is to assure a detailed review and briefing by the shift supervisor with appropriate personnel for safe and satisfactory performance. The plant Training Department will evaluate this item to determine appropriate training methods and requirements. A Human Performance Evaluation is being conducted to identify any areas that may be of concern.

(End of Abstract)

DESCRIPTION OF EVENT

At 1646 hours on Monday, December 21, 1987, with a utility non-licensed operator in the process of returning the 1D Instrument Inverter (EIIS:EF) to service following the completion of preventive maintenance to the system, St. Lucie Unit #1 tripped while operating in Mode 1 at 100 percent power. By not adequately following a plant approved procedure, the operator inadvertently placed the static transfer switch to the inverter position, thus removing the 1B maintenance bypass bus (EIIS:ED) from service without having the inverter input breaker closed. This resulted in the loss of power to the 1MD 120 volt AC bus. With the Reactor Protective System (RPS) (EIIS:JC) Hi start-up Rate B channel bistable in trip, the RPS Hi Start-up Rate logic was in 1 of 3. When power was lost to the RPS D channel, the deenergize to actuate trip bistables actuated, thus satisfying the RPS logic for tripping the reactor. The plant was immediately stabilized in hot standby Mode 3. The Auxiliary Feedwater Pumps (AFP) (EIIS:BA) started because the Steam Generator levels reached the Engineering Safety Feature Actuation System (ESFAS) (EIIS:JE) set point.

CAUSE OF THE EVENT

The root cause of the event was a cognitive personnel error by a utility non-licensed operator for not adequately following a plant approved procedure for operation of the 120 volt Instrument AC Class 1E System. There were no unusual characteristics of the work location which contributed to the personnel error.

ANALYSIS OF THE EVENT

This event is reportable under 10 CFR 50.73 (a)(2)(iv) as any event or condition that results in an automatic actuation of the (RPS) or (ESFAS). The plant response to this event was as expected for existing plant conditions. It has been concluded that no safety consequences resulted from this event because all safety functions were maintained throughout the event and plant equipment operated as expected with no component failures. The 1MD 120 volt AC bus was restored by properly placing the 1D instrument inverter in service with the 1B maintenance bypass bus as an alternate source. The health and safety of the public were not affected by this event.

CORRECTIVE ACTIONS:

1. The non-licensed operator was counseled by his supervisor on the importance of following approved procedures and the need for greater attention to detail while performing critical job responsibilities.

2. The plant Training Department will evaluate this item to determine appropriate training methods and requirements.

3. A Human Performance Evaluation of the event is being conducted to identify any areas that may be of concern.

4. A procedure for infrequent operations and manipulations is being drafted to assure a review and briefing by the shift supervisor with the appropriate personnel. This will insure adequate expertise and experience is present, the correct sequence and expected results are understood, and the impact on the plant is known before beginning.

ADDITIONAL INFORMATION:

FAILED COMPONENT INFORMATION:

All components functioned normally during this event.

PREVIOUS SIMILAR EVENTS:

See LER 335-87-010 and 335-82-071 for previous reactor trips caused by a loss of an instrument inverter.

ATTACHMENT # 1 TO ANO # 8801260221 PAGE: 1 of 1

P. O. BOX 4000, JUNO BEACH, FL 33408-0420

FPL

JANUARY 20 1988

L-88-30

10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: St. Lucie Unit 1
Docket No. 50-335
Reportable Event: 87-17
Date of Event: December 21, 1987
Reactor Trip Due to Reactor Protective System HI
Start-up Rate B Channel in Trip and the Loss of
1MD 120V AC Instrument Bus Due to Personnel Error

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,
/s/ C. O. Woody
C. O. Woody
Executive Vice President

COW/GRM/gp
Attachment

cc: Dr. J. Nelson Grace, Regional Administrator,
Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

GRM/003
an FPL Group company

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